

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION**

EDGE CAPTURE L.L.C., and EDGE  
SPECIALISTS, L.L.C.,

Plaintiffs,

V.

BARCLAYS BANK PLC, BARCLAYS  
CAPITAL INC., UBS AG, UBS FINANCIAL  
SERVICES INC., UBS SECURITIES, L.L.C.,  
WOLVERINE TRADING, L.L.C., AND  
WOLVERINE EXECUTION SERVICES,  
L.L.C.,

Defendants.

Civil Action No. 09-CV-1521

## JURY TRIAL DEMANDED

Judge Charles R. Norgle, Sr.

Magistrate Judge Denlow

**PLAINTIFFS' MEMORANDUM IN OPPOSITION TO BARCLAYS AND UBS DEFENDANTS'  
RENEWED MOTION TO DISMISS THE AMENDED COMPLAINT (D.E. 109)**

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## INTRODUCTION

For eighteen months since this action was filed, the Barclays and UBS Defendants have repeatedly sought to have this case dismissed based on their argument that the patents asserted by Edge cover subject matter ineligible for patent protection.<sup>1</sup> Now that the Supreme Court has ruled in *Bilski v. Kappos*, 130 S.Ct. 3218 (2010), Barclays' and UBS's arguments have been unmasked. Under the appropriate analysis, there can be no dispute that the claims of the patents cover patent-eligible "machines" and "processes" in compliance with 35 U.S.C. § 101.

## FACTS

The inventors of the '629 and '833 patents were the first to invent, more than a decade ago, the novel and particular implementations of machines, and the cutting-edge use of those machines, claimed in the patents. The claimed machines are much more than off-the-shelf, general-purpose computers from Best Buy or Target. The inventors altered computer systems into low-overhead and strategic configurations, transforming the systems into fast, safe, and accurate automated trading systems. Edge Specialists, as the exclusive licensee of the patents, exercises its patent rights by developing proprietary trading software, loading that software on low-overhead and uniquely-configured computer systems to provide rapid, automated derivatives trading, and maintaining those specially-implemented systems on behalf of its customers. Edge is a legitimate, practicing business with rights to enforce its intellectual property.<sup>2</sup>

Edge, based on currently available information, has alleged infringement by Barclays of **system claims** 1, 9, 14, 21, 22, and 26 of the '629 patent and **system claims** 1, 7, 9, 15, 21, and 22 of the '833

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<sup>1</sup> This action has been pending for eighteen months, but has yet to progress beyond the Rule 12 stage. On March 5, 2010, in denying Barclays' and UBS's second motion to dismiss, the Court stayed the case until the Supreme Court reached a decision in *Bilski v. Kappos*, 130 S.Ct. 3218 (2010) (D.E. 93). The Supreme Court published its *Bilski* decision on June 28, 2010. The Court accordingly lifted the stay on July 1, 2010. (D.E. 101). Barclays and UBS then filed – for a third time – their motion to dismiss. Because the arguments raised in Barclays' and UBS's instant motion are repetitive of their prior motions and briefings, Edge incorporates by reference the entirety of its past response briefs to Barclays' and UBS's respective motions to dismiss – *i.e.*, all of Edge's arguments made in Docket Entries 43 and 87.

<sup>2</sup> Barclays' and UBS's charge that Edge filed this lawsuit to extract an unwarranted settlement is a cheap tactic designed to obscure the fact that Edge is pursuing a legitimate legal recourse to address Defendants' infringement and enforce its patent rights.

patent; and infringement by UBS of **system claims** 1, 9, and 14 of the '629 patent and **system claims** 1, 7, 9, and 15 of the '833 patent (hereinafter "the asserted system claims"). Edge also has asserted one independent **method claim** (claim 24 of the '833 patent) and one dependent method claim (claim 25 of the '833 patent) against Barclays and UBS.<sup>3</sup> See Decl. of Patrick G. Burns ("Burns Decl."), Ex. A, for language of asserted claims.

**I. The System Claims are Directed to *Fully Automated, Low-Overhead Trading Systems*.**

The inventors of the patents recognized early-on that a need existed "in the art for an automated trading system that rapidly responds to trade information transmitted from an exchange, yet is safe and accurate." (See D.E. 1 at Ex. B at 2:17-20). The asserted system claims are directed to "automated trading system[s]" that meet this need through: (1) **low-overhead designs**, that are (2) **configured to engage in fully automated trading**.

First, the written descriptions of the patents-in-suit establish that the claimed "automated trading system" inventions are implemented through a low-overhead configuration and are improvements over prior art trading systems with high-overhead. In the specifications of the '629 and '833 patents, the inventors state that prior art automated trading systems existed, but were **slow due to high-overhead designs**:

Attempts have been made to implement trading systems that automate decision-making so that orders may be submitted with limited trader interaction. These systems have a number of drawbacks. For example, **user-friendly systems that automatically submit orders without trader interaction, while faster than a human trader, are believed to be relatively slow in terms of computer speed due to application and system design.**

(*Id.* at Ex. A at 1:65-67, 2:1-5. See also *id.* at Ex. B at 1:49-55) (emphasis added). According to the '629

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<sup>3</sup> Edge has asserted the current claims against Barclays and UBS based on information presently available to Edge, as set forth in paragraphs 49-89 of the Amended Complaint. (See D.E. 74). In addition, given the proprietary and confidential nature of Barclays' and UBS's infringing activities, Edge anticipates that discovery will show that additional system claims and/or method claims from each patent are, and have been, infringed by Barclays and/or UBS. For the same reasons discussed here, the patents contain other claims, not yet asserted by Plaintiffs, that similarly claim patent eligible subject matter, and contain other inventive limitations that distinguish those claims from the prior art. Barclays' and UBS's accusations that Edge is a discovery-shopper are meaningless. (See D.E. 110 at fn. 4). Edge has never contended that it needs discovery in order to develop a factual foundation for bringing this lawsuit.

patent specification, one of the reasons behind this slow operation was that “[t]he **overhead** associated with the functions performed by the backend computer and the trader stations **reduce[d] the response speed of automated trading.**” (*Id.* at Ex. B at 2:8–11) (emphasis added).

To overcome the drawback of high overhead in the prior art, the preferred embodiments of the claimed “automated trading system” inventions are described as being specifically designed to provide “an automated trading system . . . that rapidly submits orders in response to trading information received from the exchange.” (*Id.* at 2:28–31). The specification states that meaningful speed advantages would be gained if the trading system was “dedicated or substantially dedicated to performing automated trading operations, with **limited or minimized overhead** permitted for other tasks.” (*Id.* at 6:1–3) (emphasis added). As explained in the written description of the ’629 patent:

[B]ackend computer 225 is dedicated or substantially dedicated to performing automated trading-related functions

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In this way, **backend computer 225 may perform automated trading functions with limited interruption or delays associated with other tasks** the backend computers (such as backend computer 220) may be requested to perform. **This increases the response speed for automated trading operations.**

(*Id.* at 8:1-3, 12-17) (emphasis added).<sup>4, 5</sup>

Second, the claimed “automated trading system” inventions are limited to a trading system that is **configured to perform fully automated trading.** During prosecution of the patents, the inventors distinguished their claimed inventions from prior art trading systems that involved human intervention by arguing that the trading systems claimed in the patents were fully automated with no human intervention.

Specifically, during prosecution of the ’833 patent, the examiner rejected the pending system claims

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<sup>4</sup> The drawings in the patents-in-suit also illustrate both a preferred low-overhead embodiment and the low-overhead embodiment’s system performance. (*See* D.E. 1, Ex. B, Figs. 3 and 6; Ex. A, Figs. 3 and 5).

<sup>5</sup> Even Barclays and UBS recognize the inventive, low-overhead implementation disclosed in the written descriptions: “The patents’ purported novelty lies in their claimed attempt to speed up this process . . . . As **a solution**, the patents simply seek to automate the order submission process, using **a computer that is dedicated or substantially dedicated to trading, to avoid bogging down the computer with other tasks.**” (D.E. 110 at 2-3) (emphasis added).

under § 103 as being unpatentable over Rickard (U.S. Patent No. 6,016,483) in view of Garber (U.S. Patent No. 5,963,923). Burns Decl., Ex. B at EDGE0000784-789. In response, the inventors distinguished the pending claims from Rickard and Garber, which **involved human intervention**, by explaining that the claimed “automated trading systems” were **fully automated**:

**Claims 1-23 are directed to an automated trading system.** As noted above, neither Rickard nor Garber relate to automated trading . . . . As discussed above, **trading disclosed in Rickard and Garber is done by a human trader.**

*Id.* at EDGE0000802 (emphasis added). Finding the applicants’ argument persuasive, the examiner cited the fully automated trading distinction as **one of the reasons justifying allowance**:

The following is an examiner’s statement of reasons for allowance: the closest prior art of record was Rickard and Garber . . . . **Rickard fails to disclose an *automated* trading system, as in claims 1-39, but relies upon human inputs . . . .** Garber does not make *automated* buy/sell decisions based on received prices and value calculations. Thus **Garber describes trading that involves human interaction, not automated trading.** Neither Rickard or Garber, in light of the claims relate to automated trading or suggest “decision logic using at least a portion of the received market price information and transaction value to generate a decision whether to submit a response to buy or sell the first traded item.” Thus claims 1-39 are allowed over the applied prior art.

*Id.* at EDGE0001049 (italicized emphasis in original).<sup>6</sup>

Accordingly, as the specifications and file histories of both patents-in-suit establish, the claimed and inventive “automated trading system[s]” asserted in this litigation are systems that are **fully automated and in low overhead configurations**. With respect to independent claim 1 of each patent, the portions of the “automated trading system” that are fully automated and in **low-overhead configurations** are those portions that include the elements following the “comprising” clauses, such as the “receiver interface,” the “data reference logic” and “data structure,” the “transaction value calculator,” and the “output interface.”

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<sup>6</sup> The Rickard and Garber patents were also cited and considered by the examiner during prosecution of the ’629 patent (the same examiner handled both prosecutions). (*See* D.E. 1, Ex. B, List of References Cited); *see also* Burns Decl., Ex. C at EDGE0000295. Moreover, during prosecution of the ’833 patent, independent system claim 1 was “provisionally rejected on the ground of nonstatutory double patenting over claims . . . of copending Application No. 09/417,774 [the ’629 patent.]” Burns Decl., Ex. B at EDGE0000831-32. To overcome this rejection, applicants filed a terminal disclaimer. *Id.* at EDGE0000850. The Rickard and Garber patents’ failure to disclose fully automated trading thus applies with equal distinguishing force to the ’629 patent. *See NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005) (interpreting claims consistently across all patents sharing a common disclosure).



With respect to dependent claims 21, 22 and 26 of the '629 patent, and dependent claims 21 and 22 of the '833 patent, the **fully automated and low-overhead portion is at least the “backend computer”** because it contains the relevant automated trading elements (*i.e.*, the “receiver interface,” the “data reference logic” or “transaction value calculator,” the “decision logic” and the “output interface”).

## **II. The Dependant System Claims Claim Faster and More Flexible Automated Trading Systems Through Strategic Placement of Elements.**

Claims 21, 22 and 26 of the '629 patent are system claims that depend from claim 1. Claims 21 and 22 of the '833 patent are system claims that depend from claim 1. The claimed automated trading systems in the dependent system claims are **narrower in scope and more specific in design, combination, and architecture** than the independent system claims of the patents.

Specifically, as recited in claims 21, 22 and 26 of the '629 patent, and claims 21 and 22 of the '833 patent, the inventors innovatively **co-located the trading portion of the system next to the exchange and segregated the monitoring portion of the system from the trading portion**. For example, dependent claims 22 and 26 of the '629 patent include a “backend computer,” a “trader station,” and particular and inventive segregated arrangements between the “backend computer” and “trader station.” Similarly, dependent claims 21 and 22 of the '833 patent provide narrower and more specific designs, combinations, and architecture than the system defined in claim 1 of the '833 patent.

The inventors claimed these additional improvements to the placement of system elements because, as explained in the written description of the '629 patent, advantages relating to both efficiency and flexibility flow from the designs of co-location and segregation:

Moreover, the total time delay in submitting an order to the exchange site 100 includes a component attributable the transmission delay or network lag in transmitting signals between the exchange site 100 and the trader site 200. Therefore, **backend computer 225 is preferably located near to the equipment of the exchange site 100 to reduce delays associated with transmitting information and orders between the backend computer 225 and the exchange site 100**. Accordingly, the total time for responding to trading opportunities can be reduced both by reducing transmission delays and by increasing decision-making speed at the trader site 200. **Significantly,**

**the backend computer 225 may be remotely supported or controlled by a distant trader station 230, which permits the trader station 230 to be located virtually anywhere without adversely affecting the response time of the automated trading system.**

(D.E. 1 at Ex. B at 8:17–37 (emphasis added)).

## ARGUMENT

### **I. The Patents Claim Patent-Eligible “Machines” and “Processes” That Are Directed To Inventive Implementations of Automated Trading, And Not Any Abstract Ideas.**

Barclays and UBS continue to impermissibly seek a dismissal under Rule 12 on an affirmative defense that neither Barclays nor UBS has plead. *See* 35 U.S.C. § 282. Barclays and UBS bear a clear-and-convincing burden of proof on their § 101 challenge to the patentability of Edge’s claims, because the patents are presumed valid. *See State Contracting & Eng’g Corp. v. Condotte Am., Inc.*, 346 F.3d 1057, 1067 (Fed. Cir. 2003).

Here, Edge’s claims are patentable. Under 35 U.S.C. § 101, there are four separate categories of subject matter that are eligible for patenting: **processes**, **machines**, manufactures, and compositions of matter. *See Bilski*, 130 S.Ct. at 3225. As the U.S.P.T.O. has repeatedly instructed, whether a claim falls under one of § 101’s four express and distinct categories of patent-eligible subject matter is the first step in determining whether an invention is patentable. *See Burns Decl.*, Ex. D at 1-2, Ex. E at 43925. Accordingly, this brief first demonstrates that the asserted system claims fall under the § 101 category of “machines,” and the asserted method claims fall under the § 101 category of “processes.”

An invention that falls within one of these four categories is patent-eligible under § 101, as long as the invention is not a law of nature, physical phenomena, or abstract idea. *See Bilski*, 130 S.Ct. at 3225-26 (citation omitted). This principle is **equally true** for both “machine” claims and “process” claims. This brief next addresses how the asserted claims do not fall within the three exceptions to patent-eligibility.

**A. The Asserted System Claims Fall Under the § 101 Category of “Machines,” And the Method Claims Fall Under the § 101 Category of “Processes.”**

**1. The asserted system claims are “machines.”**

The Supreme Court noted in *Bilski* that “[i]n patent law, as in all statutory construction, ‘[u]nless otherwise defined, ‘words will be interpreted as taking their ordinary, contemporary, common meaning.’” *Bilski*, 130 S.Ct. at 3226 (citing *Diamond v. Diehr*, 450 U.S. 175, 182 (1981)). While the definition of “machine” was not addressed in *Bilski* because the claims-at-issue in that case were method claims, the Supreme Court previously addressed the term “machine” in *Diamond v. Diehr*. In *Diehr*, the Court stated that “[t]he term machine includes **every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result.**” 450 U.S. at 182, fn. 7 (emphasis added).

The asserted system claims fall within this definition and thus within the § 101 category of “machines.” Independent claim 1 of the ’629 patent and independent claim 1 of the ’833 patent are directed to different and distinct **automated trading systems**. The inventive machine in claim 1 of the ’629 patent incorporates “data reference logic” and a “data structure” to achieve the result of rapid trading. The inventive machine in claim 1 of the ’833 patent includes something different, “a transaction value calculator,” to achieve that result. Moreover, dependent claims 21, 22 and 26 of the ’629 patent, and dependent claims 21 and 22 of the ’833 patent, include a “backend computer” and a segregated “trader station,” all in furtherance of making the inventive machines more efficient and faster.

In sum, each system claim defines a different inventive machine, comprised of different device elements, and squarely meets the Supreme Court’s definition of “machine” under § 101.

**2. The asserted method claims are “processes.”**

The asserted method claims fall under the § 101 category of “processes.” With respect to the term “process,” the Supreme Court in *Bilski* applied the definition of “process” found in § 100 (b) of the Patent

Act: “process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.” *Bilski*, 130 S.Ct. at 3226-29.

Contrary to Barclays’ and UBS’s argument here, the *Bilski* Court **specifically rejected** the argument “that would require [the definitional terms ‘process, art or method’] to be tied to a machine or to transform an article.” *See id.* at 3226. In other words, nothing in the definition of the term “process” requires a machine or transformation, and thus the Court rejected the machine-or-transformation test as the **sole test** for deciding whether a “process” claim is patent-eligible. *Id.* at 3226-27. In addition, the Court was unable to find “any argument that the ‘ordinary, contemporary, common meaning’ . . . of ‘method’ excludes business methods.” *Id.* at 3228. Indeed, the Supreme Court concluded that business methods can constitute patentable “processes” under § 101 of the Patent Act. *Id.* at 3228-29.

Under the statutory definition of “process,” the **method claims** asserted by Edge fall under the § 101 category of “processes.” The asserted method claims (claims 24 and 25 of the ’833 patent) are drafted in “method” format, and define a specific process of automated trading that implements the particular and inventive machines defined in the asserted system claims of the ’833 patent.

**Barclays and UBS improperly treat all claims in the Edge patents, whether claiming systems or methods, as if they were “process” claims.** The system claims are not “process” claims.<sup>7</sup> At the heart

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<sup>7</sup> Barclays and UBS also appear to take the nonsensical position that a patent that claims automating a process traditionally done by humans is *per se* unpatentable (*See, e.g.*, D.E. 110, *passim*). Such an argument ignores the history of scientific advancement, as well as patentable subject matter. History is replete with examples of patentable machines that replaced human activities:

- The steam-engine tractor, which automated ploughing and made farming faster and more efficient (*See, e.g.*, U.S. Patent No. 257,444).
- The telephone by Alexander Graham Bell, which replaced letters and telegrams, making communications drastically faster and more efficient (U.S. Patent No. 174,465).
- The dishwasher, which made washing dishes faster and more efficient (*See, e.g.*, U.S. Patent No. 355,139).

Many other examples abound (*e.g.*, calculators, stoves, computers, etc.). It is beyond debate that inventive implementations of machines for performing functions that humans traditionally performed are patentable under § 101. In any event, as set forth above, the inventive implementations claimed in the patents-in-suit go well beyond simply

of Barclays and UBS's motion is a conflation of two statutory terms — “machines” are simply different from “processes” under the Patent Act. As the Supreme Court explained, “machines” are clearly categorically different from “processes”:

**One may discover a new and useful improvement in the process** of tanning, dyeing, &c., irrespective of any particular form of machinery or mechanical device. **And another may invent a labor-saving machine** by which this operation or process may be performed, and **each may be entitled to his patent.**

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**Yet A could not have a patent for a machine, or B for a process;** but each would have a patent for the means or method of producing a certain result, or effect, and for the result or effect produced.

*Diehr*, 450 U.S. at 182, fn. 7 (citation omitted) (emphasis added). Here, as described above, the claims of the patents cover both patent-eligible machines, as well as patent-eligible processes. The asserted system claims expressly cover machines that squarely meet the Supreme Court's definition of “machine” in *Diamond v. Diehr*. There is no merit to Barclays' and UBS's statement that “[w]hile some of the asserted claims are directed to an automated trading ‘system,’ and others are directed to an automated trading ‘method,’ the two types of claims mirror one another.” (D.E. 110 at fn. 13). In no uncertain terms, the system claims are “**machine**” claims, while the asserted method claims are “**processes**.”<sup>8</sup>

#### **B. The System Claims Do Not Fall Within The Three Exceptions To Patent-Eligibility.**

There are only three exceptions to the patent-eligibility of claims that fall under one of the § 101 categories of subject matter – (1) laws of nature, (2) physical phenomena, and (3) abstract ideas. *Bilski*, 130 S.Ct. at 3225-26 (citation omitted). “Congress took this permissive approach to ensure that “ingenuity should receive a liberal encouragement.”” *Id.* at 3225 (citation omitted).

Barclays and UBS do not argue that the asserted claims claim a law of nature or natural phenomenon. Rather, Barclays and UBS argue that the system claims improperly claim an abstract idea.

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automating human tasks. The claims are directed to machines that provide fast, accurate, and automated trading based on specific system architecture.

<sup>8</sup> Were the Court to decide that Edge's asserted **system** claims are “processes,” rather than “machines,” under § 101, the asserted system claims squarely meet the “machine” prong of the machine-or-transformation test, for the same reasons as discussed in this Brief.

Contrary to Barclays' and UBS's wild accusations, the inventions do not attempt to claim the abstract idea of automated trading itself, nor do the inventions monopolize the use of computers to perform an abstract idea – whether the abstract idea is automated trading in general, automated trading of derivatives, or automated trading in accordance with specific algorithms.

**1. The system claims do not claim an abstract idea because the claimed elements are connected to *low-overhead* and *fully automated* trading systems.**

The asserted system claims of the patents are directed to inventive and improved implementations of automated trading systems that do not preempt a general computer implementation of an abstract idea. Here, as described *supra* at pages 2-5, the written descriptions and file histories of the patents demonstrate that the preamble claim term “automated trading system,” when properly construed, distinguishes the claimed inventions over the prior art of record, **which had high-overhead configurations or lacked full automated trading capabilities**. See *Harris Corp. v. IXYS Corp.*, 114 F.3d 1149, 1153 (Fed. Cir. 1997) (declining to accept a construction that would ensnare the prior art of record). Thus, “automated trading system” should be construed to cover an **automated trading system** where the portion of the system engaged in **automated trading employs a low-overhead configuration**. Moreover, as discussed *supra* at pages 3-5, the file histories demonstrate that “automated trading system” describes a trading system that is designed to perform **fully automated trading, with no human intervention**.<sup>9</sup>

Properly construed, the asserted system claims, rather than claiming abstract ideas, are therefore directed to specific and concrete implementations of automated trading – that is, to specific, low-overhead

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<sup>9</sup> A preamble limits a claim when it recites a necessary and defining aspect of the invention. See *On Demand Mach. Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1343-44 (Fed. Cir. 2006). Moreover, whether a claim preamble is limiting depends on the facts of each case in light of the overall form of the claim, and the description of the invention in the specification and prosecution history. See *Applied Materials, Inc. v. Adv. Semiconductor Materials Am., Inc.*, 98 F.3d 1563, 1572-73 (Fed. Cir. 1996); see also *Catalina Marketing Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808-9 (Fed. Cir. 2002).

configurations that perform fully automated trading, with no human intervention.<sup>10</sup>

The Supreme Court precedent cited by Barclays and UBS does not compel a different conclusion, and in fact demonstrates that the asserted system claims do not claim an abstract idea. In *Gottschalk v. Benson*, for example, the claims at issue covered the use of a particular algorithm that converted binary-coded decimal numbers to pure binary numbers in such a way that it had the practical effect of preempting the mathematical algorithm itself. See 409 U.S. 63, 65 (1972). The *Benson* claims were framed so broadly as to cover all practical implementations of the claimed algorithm. See *id.* at 71-72. Unlike the claims in that case, however, the asserted system claims of the patents-in-suit are directed to specific and concrete implementations, not all implementations of automated trading or the algorithms employed. The claims do not, therefore, preempt an abstract idea.<sup>11</sup>

Moreover, the inventive implementations of the asserted system claims extend well beyond a mere post-solution activity related to an abstract idea. The inventive contributions of the asserted system claims go to the intrinsic nature of the inventive machines themselves and the cutting-edge methods limited to those machines. This fact distinguishes the asserted system claims from unpatentable claims that may not wholly pre-empt an abstract idea, but are still unpatentable under § 101 because the only innovation offered is an abstract idea. This principle was established in *Parker v. Flook*, 437 U.S. 584 (1978), when the Supreme Court held that “a new and presumably better method of calculating alarm limit values” was unpatentable, “not because it contains a mathematical algorithm as one component, but because once that algorithm is assumed to be within the prior art, the application, considered as a whole, contains no patentable invention.”

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<sup>10</sup> As previously argued by Edge (D.E. 87), to appropriately consider patentability under § 101, the Court must first construe the claims, and thus this issue is properly raised at summary judgment after claim construction. See *In re Bilski*, 545 F.3d 943, 951 (Fed. Cir. 2008) (en banc) (stating that claim construction is an important first step in a § 101 analysis). In order to construe the claims, this Court must look to the entire intrinsic record, including both the written description and file histories. See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314-17 (Fed. Cir. 2005) (en banc) (citation omitted).

<sup>11</sup> Edge’s system claims are more akin to the claims in *O’Reilly v. Morse*, 56 U.S. 62, 84-86, 112 (1853), that were directed to specific embodiments of the electromagnetic telegraph that had support in the specification and thus were patent-eligible under § 101.

*Id.* at 594-95.<sup>12</sup> Like the exclusionary principle in *Benson*, the *Flook* principle does not apply here. The asserted system claims' inventive contributions to the art of automated trading in electronic exchange networks are not improvements to trading algorithms, mathematical formulas, or trading concepts, but rather are **inventive improvements to the physical design and architecture of the automated trading systems themselves**.

Finally, the asserted system claims are distinguishable from the *Bilski* claims. Unlike here, the applicant in *Bilski* attempted to patent the pure mental process and mathematical formula associated with the basic concept of hedging, and the claims were therefore unpatentable under § 101. *See Bilski*, 130 S.Ct. at 3229-30. The *Bilski* claims covered pure mental concepts, as the Supreme Court noted, and were entirely divorced from anything technical. "Applicants themselves admit that the language of claim 1 does not limit any process step to any specific machine or apparatus." *In re Bilski*, 545 F.3d at 962. Edge's asserted system claims are fundamentally different. Rather than focusing on pure mental concepts, Edge's inventive system claims are primarily focused on physical improvements to automated trading systems through, *inter alia*, a low-overhead design. *See supra* at pages 2-5.

Here, it should also be remembered that the U.S.P.T.O never leveled a § 101 challenge against any of the **system claims** during prosecution, even though the U.S.P.T.O. had eight years to do so for the '629 patent and six years to do so for the '833 patent.<sup>13</sup>

Barclays' and UBS's arguments that the Edge claims are unpatentable because they are computer or software related should be rejected. The law does not freeze patents "to old technologies, leaving no room for the revelations of the new, onrushing technology." *Benson*, 409 U.S. at 71. In *Bilski*, the Supreme Court emphasized that:

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<sup>12</sup> *Flook* also stands for the proposition that the prohibition against patenting abstract ideas cannot be circumvented by limiting the use of an abstract idea to a particular field or by adding insignificant post-solution activity. *See Bilski*, 130 S.Ct. at 3230.

<sup>13</sup> While the examiner issued a rejection of the presently non-asserted method claims in the '629 patent under 35 U.S.C. § 101, **he ultimately withdrew his objections** and allowed the claims to issue.



Section 101 is a “dynamic provision designed to encompass new and unforeseen inventions.”

....

[T]here are reasons to doubt whether the [machine-or-transformation] test should be the sole criterion for determining the patentability of inventions in the Information Age. As numerous *amicus* briefs argue, **the machine-or-transformation test would create uncertainty as to the patentability of software, advanced diagnostic medicine techniques, and inventions based on linear programming, data compression, and the manipulation of digital signals.**

*Bilski*, 130 S.Ct. at 3227 (emphasis added). There is, therefore, no *per se* bar under § 101 to patenting computer-related inventions, or software.

**2. The dependent system claims do not claim an abstract idea because they claim faster and more flexible automated trading systems through strategic placement and segregation of system elements.**

For the same reasons, the dependent system claims do not claim an abstract idea. In addition, the dependent system claims claim additional system improvements to increase speed and efficiency, and further distinguish their systems over the prior art, through the **strategic placement and segregation of system elements**. *See supra* at pages 5-6. These types of two-computer configurations are **concrete implementations**, and are thus patent-eligible subject matter. Such two-computer configurations have already been found patentable under § 101. *See, e.g., Ex parte Wasynczuk*, Appeal 2008-1496, 2008 WL 2262377, at \*10 (B.P.A.I. Jun. 2, 2008) (Burns Decl., Ex. F); *see also* discussion *supra* at pages 11-13.<sup>14</sup>

**C. For The Same Reasons, The Asserted Method Claims Do Not Fall Under Any Of The Three Exceptions To Patent-Eligibility.**

The asserted method claims do not claim an abstract idea for the very same reasons that the asserted system claims do not. Edge’s only currently asserted method claims (claims 24 and 25 of the ’833 patent) are **inherently tied to the particular, inventive machines** claimed by the asserted system claims of the

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<sup>14</sup> The inventive and specific low-overhead machines, along with the machines’ inventive and strategic positioning, go to the heart of the invention. The Edge claims are directed to a specific implementation of automated trading in an electronic exchange system network, and the claims recite specific structure and elements that are tied to the functions of analyzing, decision-making, and submitting requests for market transaction. Thus, the claimed systems are tied to particular machines, and impose meaningful limits on claim scope that go well beyond insignificant extra-solution activity. *See, e.g., Ex parte Dickerson*, Appeal 2009-1172, 2009 WL 2007184, at \*8 (B.P.A.I. Jul. 9, 2009) (holding patentable claims directed to or tied to a particular computer system) (Burns Decl, Ex. G).

'833 patent, and thus satisfy the machine-or-transformation test.<sup>15</sup> As described above for the asserted system claims, the asserted method claims do not claim an abstract idea, because they are **executed by inherently-claimed, particular machines and machine elements that improve the speed and response time of prior art automated trading methods through reduced or limited overhead**. In *Bilski*, the method claims were tethered to **no** machines at all. *Bilski*, 130 S.Ct. at 3224, 3231. In direct contrast, the asserted method claims of the patents-in-suit are implemented by and tethered to inherently-claimed, particular and inventive machines. (See D.E. 1 at Ex. A at claims 24 and 25). Thus, the asserted method claims are entirely free of the defect that afflicted the method claims in *Bilski*.<sup>16</sup>

## **II. If The Court Elects To Issue A Formal Order Dismissing Edge's Claims For Indirect Patent Infringement Against Barclays And UBS, It Should Do So Without Prejudice.**

To avoid confusion, Edge previously withdrew without prejudice, **before an answer** was filed, any claims for indirect patent infringement against Barclays and UBS. Edge explained that it currently asserts only claims for direct patent infringement. Should discovery expose facts that support the elements of contributory infringement and/or of active inducement, Edge reserves the right to amend its Complaint to specifically plead and assert those claims. Accordingly, if the Court elects to issue a formal order dismissing Edge's claims for indirect patent infringement, it should do so without prejudice..

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<sup>15</sup> In addition, the method claims also meet the "transformation" prong by transforming data representing one thing into another state or thing. See D.E. 87.

<sup>16</sup> Moreover, the factors provided in the U.S.P.T.O.'s post-*Bilski* Interim Examination Guidelines also show that Edge's asserted method claims do not claim an abstract idea. See Burns Decl., Ex. E. For instance, "[w]here a machine or apparatus is recited or inherent in a patent claim," the U.S.P.T.O. considers the following factors:

(1) The particularity or generality of the elements of the machine or apparatus, *i.e.*, the degree to which the machine in the claim can be specifically identified (not any and all machines). **Incorporation of a particular machine or apparatus into the claimed method steps weighs toward eligibility.**

(2) **Whether the machine or apparatus implements the steps of the method. Integral use of a machine or apparatus to achieve performance of the method weighs toward eligibility**, as compared to where the machine or apparatus is merely an object on which the method operates, which weights against eligibility.

(3) **Whether its involvement is extra-solution activity or a field-of-use . . . .**  
*Id.* at 43925 (emphasis added).

### **CONCLUSION**

For all the foregoing reasons, Edge asks this Court to deny Barclays' and UBS's renewed motion to dismiss.

Dated: October 4, 2010

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

The undersigned attorney hereby certifies that on October 4, 2010, he caused a true and correct copy of **PLAINTIFFS' MEMORANDUM IN OPPOSITION TO BARCLAYS AND UBS DEFENDANTS' RENEWED MOTION TO DISMISS THE AMENDED COMPLAINT (D.E. 109)** to be served on the below parties through the CM/ECF system:

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